

## REMARKS/ARGUMENT

Claims 1-24 are currently pending in the present application. Claims 3, 4, 8, and 16 have been amended herein. It is respectfully submitted that the amendments to the claims do not add new matter and have adequate support throughout the Specification.

Applicants thank the Examiner for allowing claims 9-15 and 18-24 and for indicating that claims 3, 4, and 8 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Applicants have amended claims 3, 4, and 8 in accordance with the Examiner's suggestions. It is respectfully submitted that these amendments do not add new matter and have adequate support throughout the Specification. It is now believed that pending claims 3, 4, 8, 9-15 and 18-24 are in allowable condition.

Furthermore, Applicants make clear that the amendments to claims 3, 4, and 8 were not made for purposes of patentability or to avoid the prior art. Rather, these amendments were made for the sole purpose of placing allowable subject matter in allowable condition. Accordingly, Applicants do not intend by such amendments to limit the scope of equivalents afforded claims 3, 4, and 8.

Otherwise, Applicants respectfully traverse all claim rejections for the reasons that follow:

### **I. REJECTIONS OF CLAIMS 1, 2, 5-7, 16, AND 17 UNDER 35 U.S.C. § 102(e)**

Claims 1, 2, 5-7, 16 and 17 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Published Patent Application No. 2003/0006720 to Borella et al. (hereinafter "Borella"). Respectfully, Applicants traverse.

Claim 1 recites "[a] control circuit for an electronic ballast with a power switch, comprising: a driver circuit for driving the power switch; a switching control circuit coupled to the driver circuit for providing signals to the driver circuit for operating the power switch; a feedback circuit coupled to the driver circuit and the control circuit for providing control information to the control circuit based on output values of the driver circuit; a fault responsive circuit coupled to the feedback circuit and the driver circuit for responding to faults detected in

the feedback circuit; and the fault response circuit is operable to disable the driver circuit upon detection of a fault."

Borella relates to a fault management method for electronic ballasts. As characterized, the fault management method reduces the chance of mistakenly detecting erroneous fault conditions. (Borella, page 1, paragraphs 5-9). Figure 3 of Borella illustrates a ballast circuit for performing the method. The circuit includes a lamp controller 30 operable to drive an external half-bridge 33, a resonant circuit 34, lamp 35 coupled to the half-bridge 33, an external current detection circuit 36 coupled between the half-bridge 33 and the lamp controller 30, and a no-load detection circuit 37 coupled between lamp 35 and the lamp controller 30. (Borella, page 2, paragraph 28; Figure 3). External current detection and no-load detection circuits 36, 37 provide lamp controller 30 with appropriate feedback signals that enable lamp controller 30 to detect fault conditions. (Borella, page 2, paragraph 28). The lamp controller 30 includes a controlled oscillator 44 coupled to control logic 42 for driving a driver 41, which, in turn, provides appropriate control signals for controlling half bridge 33. (Borella, page 2, paragraph 29). Controlled oscillator 44 is coupled to an external capacitor  $C_{osc}$  for setting a basic operating frequency of oscillator 44, which also receives three control signals: (a)  $B_{run}$  to signal a time to begin the oscillator; (b)  $B_{ign}$  to signal a time to begin ignition; and (c)  $B_{pre}$  to signal a time to begin preheating of the lamp 35. (Borella, page 2, paragraph 29).

It is respectfully submitted that Borella does not disclose "a feedback circuit *coupled to the driver circuit* and the control circuit for providing control information to the control circuit based on output values of the driver circuit." By providing the feedback circuit between the driver and control circuits, the ballast control circuit of claim 1 permits for a more efficient and less complex design. In contrast, Borella describes two feedback circuits (i.e., current detection circuit 36; and no-load detection circuit 37), neither of which is coupled to the driver circuit 41 (i.e., an internal component of the control circuit 30). As described in the Specification and illustrated in Figure 3, driver 41 is coupled only to control logic block 42 and to half-bridge circuit 33. Driver circuit 41 is simply not coupled to a feedback circuit, much less "a feedback circuit . . . for providing control information to the control circuit based on output values of the driver circuit," as recited in claim 1.

Further regarding claim 5, which depends from claim 1, it is respectfully submitted that Borella does not disclose "a minimum frequency input signal supplied to the switching control circuit for providing a minimum frequency for operation of the switching control circuit," as recited in this claim. As described above, the controlled oscillator 44 is coupled to a Cosc capacitor to determine a basic running frequency. However, there is nothing in Borella to indicate that this "frequency," which is set by Cosc, is a minimum frequency.

For at least the foregoing reasons, it is respectfully submitted that claims 1 and 5 are allowable over Borella. Furthermore, since claims 6 and 7 ultimately depend from claim 1, since claim 16 has been amended herein to recite "determining a feedback control based on the sensed parameter, *the sensed parameter being provided by a feedback circuit coupled between a driver circuit and a switching control circuit of a ballast*," and since claim 17 depends from claim 16, it is respectfully submitted that these claims are allowable over Borella for at least the same reasons. Accordingly, it is kindly requested that the rejections of claims 1, 2, 5-7, 16 and 17 under 35 U.S.C. § 102(e) be withdrawn.

## II. CONCLUSION

In view of the foregoing, it is respectfully submitted that all pending claims are allowable. Accordingly, reconsideration and prompt allowance of all pending claims is therefore earnestly solicited.

I hereby certify that this correspondence is being deposited with the United States Postal in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450, on November 2, 2004:

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Name of Person Mailing Correspondence

  
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